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2 **BEFORE THE STATE OF WASHINGTON**
3 **ENERGY FACILITY SITE EVALUATION COUNCIL**

4 In the matter of
5 Application No. 2002-01

6 BP WEST COAST PRODUCTS, LLC

7 BP CHERRY POINT
8 COGENERATION PROJECT

EXHIBIT 43.0 (DG-T)

9 **WHATCOM COUNTY'S PREFILED TESTIMONY**
10 **WITNESS # 43 : Douglas Goldthorp**

11 Q: Please introduce yourself to the Council.

12 A: My name is Douglas Goldthorp, and I am the County Geologist for Whatcom County. I
13 am a licensed geologist, engineering geologist, and hydrogeologist in Washington State,
14 and I am familiar with the local geology of Whatcom County.

15 Q: What is the subject of your testimony?

16 A: I have reviewed those portions of the application and DEIS pertaining to the geology for
17 the project and wish to voice several concerns and offer my opinion as to further
18 geological investigation and mitigation which may be warranted for a project of this
19 nature.

20 Q: How would you characterize the nature of this project?

21 A: If the proposed facility is intended to be a significant source of electrical power for our
22 region, the public will no doubt come to rely upon its continued operation to supply its
23 emerging energy needs. It is therefore clear that the facility is one that must be sited and
24 designed to withstand significant seismic events. For those reasons, I think that it is
25 imperative that the Energy Facility Site Evaluation Council (EFSEC) take all reasonable
steps to ensure that the facility is appropriately designed and monitored for seismic
events.

Q: What concerns do you have about the geology of the site?

1 A: In general, the seismicity and geology of the site should be better defined utilizing all
2 available data, including the recent research hypothesis of Dr. Don Easterbrook,
3 Professor Emeritus of Geology, Western Washington University, regarding the Sumas
4 Fault and its potential extension to the Cherry Point area. A separate seismic assessment
5 report should include at a minimum, but not limited to: the previously reported
6 information; the existing water well log data, petroleum exploration well and geophysical
7 data, geotechnical data; the known and postulated fault structures that may project
8 through the vicinity, and all other relevant published and electronically available
9 geological and geophysical information within a geologically significant radius.

10 Although Dr. Easterbrook's hypothesis is mentioned in the application and DEIS, I am
11 also concerned that to date the project review has not incorporated in a meaningful way
12 the issues which Dr. Easterbrook's research findings raise in relation to the construction
13 of the project.

14 Furthermore, as I mentioned in my comments to the DEIS, I am also concerned that the
15 geological investigation performed on the project site did not include a reference or
16 analysis of invaluable depth-to-bedrock, bedrock, and seismic information that has been
17 developed by petroleum explorations over the past several decades near the site.

18 Q: How do you feel these deficiencies could be addressed?

19 A: The geologic deficiencies mentioned above could be included in a separate seismic
20 assessment report.

21 Given the nature of this facility, I believe a Probabilistic Seismic Hazard Assessment
22 (PSHA), that would define the level of construction design necessary for this specific
23 site, should be required as part of the post-approval facility design criteria.

24 EFSEC faced similar issues in relation to the siting of the Sumas Energy 2 project and
25 recognized in its Council Order No. 768 the value which a PSHA can bring forward
during the design phase of a project of this nature. As the geology of the two sites may
exhibit commonalities, those prior findings and conclusions may be relevant to the
present project action and should be considered in the context of the present application.

Additionally, if the project is permitted, the conditions of its operation should include an
ongoing post-construction seismic monitoring program. Such a program would enhance
the safety of the facility and its workers, as well as further public assurance of continued
energy service.

Q: Would you please briefly describe what you mean by an ongoing post-construction
seismic monitoring program?

1 A: Such a program would require the installation of monitoring devices such as
2 accelerometers or strain gauges connected to a data acquisition system, which would
3 provide indications as to how the structure or facility has reacted to observed or measured
4 seismic events. Should a significant seismic event occur, inspection of the passive
5 indicators could provide valuable feedback to the facility engineers to determine whether
6 any remedial structural measures may be warranted as a result of the event. A qualified
7 structural engineer can easily develop the details of such a monitoring program. Such a
8 monitoring program should not be too economically burdensome for the applicant, and
9 can obviously provide valuable feedback to help ensure the integrity of the structure and
10 the safety of its occupants. A new initiative by the United States Geological Survey
11 (USGS) is attempting to convince developers to consider seismic instrumentation for new
12 buildings.

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END OF TESTIMONY

I declare under penalty of perjury that the above testimony is true and correct to the best of my knowledge.

Executed at Bellingham, Washington, on this 6th day of November, 2003.

By: _____
Douglas Goldthorp